US Environmental Protection Agency

Office of the Chief Financial Officer

Office of Technology Solutions

Budget Formulation and Performance Management Alternatives Analysis

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1.0 Introduction

This document has been developed in support to the Environmental Protection Agency (EPA), Office of the Chief Financial Officer (OCFO) in identifying the end-state budget formulation and performance management solution under the Financial Systems Modernization Project (FSMP).

1.1 Purpose

The purpose of this analysis is to provide the EPA with the information needed to assist in selecting a system alternative to meet budget formulation and performance management requirements under the FSMP. This analysis will guide the EPA in selecting a cost effective budget solution that meets requirements, and is compatible with the core financial system currently under development.

1.2 Background

The EPA currently utilizes two systems for purposes of managing the formulation and performance goals of their annual budget authority: the Budget Automation System (BAS); and the Integrated Resource Management System (IRMS). The FSMP initiative includes within its scope a new single system to replace BAS and IRMS, which must be integrated with the core financial system being implemented agency wide. BAS was built and is currently maintained by KeyLogic, an IT consulting firm, while IRMS was originally built by CGI.

The EPA selected the CGI Federal Momentum product for the FSMP as the core financial and accounting system. Momentum is a module-based application that includes integrated modules for payments, receipts, general ledger, budgeting, and others. However, the functionality of the existing budget module in Momentum did not pass EPA's product acceptance testing efforts after contract award.

CGI and EPA coordinated to collect all of the actual system functionality requirements that the EPA needs to field a new budget formulation / performance management solution. These requirements have been accepted by EPA, and will be used as the baseline for evaluating functionality of competing alternatives. Based on these requirements, CGI and KeyLogic have prepared Rough Orders of Magnitude (ROM) cost estimates as a starting point for EPA's consideration.

1.3 Legislative Authority

To maximize the chance for acceptance of the final solution by the Office of Management and Budget (OMB), and the General Accounting Office (GAO), the solution selection approach should seek to minimize the risk of non-compliance with directives outlined by in order. The guidance from GAO and OMB appears to have been developed from similar, but different perspectives; GAO focuses on completing a rigorous analysis and detailed documentation of all possible costs, while the OMB end focus is on the end result return on investment or net present value. Ultimately both bodies are consistent in that as much detail as possible and available should be included in the analysis to assist in the justification process.

1.4 References

The source documents presented in Table 1.4.1 below were referenced for informational purposes in the development of this document.

Document Name	Source
Cost Estimating and Assessment Guide, March 2009	General Accounting Office
Circular A-94: Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs, October 1992, as amended	Office of Management and Budget
Review of Available Systems, Version 1.0, Fall 2008	Budget Formulation and Execution Line of Business, Decision Matrix Workgroup

Table 1.4.1 – Information Sources

2.0 Identification of Alternatives

A primary goal of the alternatives analysis for a budget formulation and performance integration solution is to provide EPA management information needed to make an informed selection decision with which to move forward. For purposes of this analysis, it is assumed that the functional requirements as captured by the CGI / EPA team are indeed final, and represent all of the end-state functionality required for acceptance and implementation. The potential need for formal business process reengineering (BPR) of EPA's budget formulation and performance integration practices is outside the scope of this document.

2.1 Approach Overview

The approach to selecting a final budget formulation and performance management solution includes a formal process for identifying and evaluating all of the competing alternatives. Ultimately, only those alternatives deemed viable were considered for selection. Under this initiative, a viable alternative is one that will meet the EPA's business requirements, while being technically and economically reasonable.

The analysis team completed the following four step process to arrive at a recommended solution:

1. Perform a review and analysis of existing research on budget formulation and performance integration topic. The purpose of this step is to leverage work already completed to help ensure EPA is working with all available information in making a sound decision. The details associated with this step are described in Section 2.2.
2. Identify at least four to five possible solution alternatives for further consideration. The alternatives identified were reviewed against screening or filtering questions to help the analysis team move forward with options that have a better chance of success, or are viable. The details associated with this step are described in the first part of Section 2.3.
3. Based on the results of the alternative screening activities, the team determined that two alternatives warranted more detailed analysis. The details associated with this step are described later in Section 2.3.

4. Perform an independent evaluation of the two viable solutions identified in step 3 of this process. The details associated with this step are described in Section 3.0.

2.2 Analysis of Existing Research

The Budget Formulation and Execution Line of Business (BFELOB) Decision Matrix Working Group (of which the EPA is a participant) performed comprehensive research on available options for budget formulation, execution, and performance integration solutions, and published its results in 2008. The results of this research are meant to be a guide for all federal agencies as they review their system needs. The BFELOB followed a formal procedure for identifying which solutions to review. The basic (abbreviated) steps were as follows:

- Collected functional requirements from federal agencies.
- Used these requirements to develop scenarios against which available solutions could be tested.
- Conducted a survey to develop list of federal systems to review.
- Issued RFI to the vendor community to identify additional systems.
- Reduced population to nine systems that specifically addressed the federal budgeting requirements (1 GOTS, 5 in place in Fed, 3 vendor systems), including the EPA BAS application, and the CGI solution discussed previously.
- Participated in demonstrations of each system, which were used to rate each solution against the scenarios being tested.

As noted in their final review publication, there are serious limitations that should be considered by reviewers of their work, including but not limited to the following:

- Reviews only conducted on systems identified and made available to review; other systems could exist.
- Reviews reflect capabilities at one point in time. Each was in the process of being modified and improved. New features could be available today.
- Responses from federal agencies and the vendor community were not confirmed by the working group.

A summary of the rankings by the 15 functional groups defined by the BFELOB during their work is presented in Table 2.2.1 below. The rankings for each functional group represent the average for that group, while the detail average computation considered the detailed items within each group. The system names are generic, except for the three for which EPA holds known specific knowledge. The rankings are on a scale with 0 used when functionality was not observed, and 5 used for superior functionality.

Functional Requirement Groups	Treas GOTS	Fed 1	EPA (BAS)	Fed 3	Fed 4	Fed 5	Vend 1	Vend 2	CGI
System Control and Navigation	4	4	4	4	4	3	5	5	4
Queries and Reports	3	2	4	4	1	1	5	5	5
Process Management: Workflow, Messaging, and Documents	4	1	1	0	5	1	3	5	4
Strategic Planning and Performance	4	0	5	0	3	0	4	0	5
Creating the Budget	4	2	3	4	5	2	4	5	5
Budget Allocations, Crosswalks, Comparisons	3	3	5	4	3	0	3	5	5
Linking Resources to Performance	0	0	4	0	1	0	3	0	5
Budget Modeling and Projections	0	2	5	0	0	0	3	4	4
Budget Processing	1	1	5	1	0	0	5	3	5
Funds Distribution	0	5	0	0	0	0	3	5	5
Apportion	0	0	0	0	0	0	0	0	5
Continuing Resolutions	0	5	5	0	0	0	1	0	3
Withdrawals / Cancellations	0	0	0	0	0	0	0	0	0
Reprogram	0	3	1	0	0	0	3	5	5
Financial Planning	0	3	5	0	0	1	3	5	5
Detail Averages	**2.44**	**1.89**	**3.69**	**1.74**	**2.48**	**0.69**	**3.61**	**3.50**	**4.57**
Relative Rank	**6**	**7**	**2**	**8**	**5**	**9**	**3**	**4**	**1**

Table 2.2.1 – Summary BFELOB Rankings

The EPA has already evaluated the Treasury Government-of-the-Shelf (GOTS) product, as well as the CGI application. In both cases, the EPA determined that significant rework would be required to meet its budget formulation and performance management needs. Of the remaining solutions, it is generally known in the budget community that the Vendor 2 application is good, but appears to be customized for use in non-civilian areas of government. The Vendor 1 solution is generally known to be in the process of development for federal agency use, but is not currently ready for deployment. What is also known is that the Fed 4 solution is the only

one, outside of the EPA's own solution, to be fully implemented and in use agency-wide at a CFO Act federal agency (Dept of Labor). However, it should be noted that this solution is heavily customized for that agency's own use, which may or may not be in line with EPA's business requirements.

2.3 Alternative Screening

Based on all of the information available to EPA, five general alternatives were defined and are summarized in Table 2.3.1 below.

Alternative	Notes
1. Upgrade BAS / Maintain IRMS	This alternative would largely keep IRMS as it exists today, but incorporate additional required functionality into the BAS application (for example, web-enable BAS) where appropriate.
2. New Custom Solution for BAS / IRMS from KeyLogic	This approach would be based on the KeyLogic ROM for building a new application fully based on all EPA requirements, including those currently satisfied by IRMS.
3. CGI New COTS Based on EPA Requirements	This approach is based on the CGI ROM for comprehensively redeveloping their BF/PM module based on EPA requirements.
4. Partner with Federal Agency	Section 2.2 notes that at least one other federal agency has a comprehensive solution in place that could be used as a starting point for a partnership initiative.
5. Transition to GOTS	The GOTS solution here is the Treasury Budget Formulation and Execution Manager.

Table 2.3.1 – Strategic Alternatives

2.3.1 Assumptions

The following assumptions were made in making a general assessment of the alternatives available to EPA:

- The ROMs requested by EPA are for the same scope of work.
- Technical infrastructure needs are not materially different for any non-GOTS alternative.
- Integration of status quo solution with FSMP will be accomplished at no additional cost from current FSMP planned values.

2.3.2 Screening Criteria

The list below represents the general functional screening criteria used to identify the alternatives most likely to represent viable solutions for the EPA. A solution is deemed viable to EPA's needs if it receives three or more positive responses against the questions below. The screening criteria questions were applied equally to each alternative presented in Table 2.3.1 above.

1. Will the solution meet all of EPA's functional requirements for budget formulation and performance integration?
2. Does the solution represent a single application in use agency-wide at a CFO Act agency today?

3. Can the solution be easily integrated with the existing CGI / FSMP solution?
4. Does the solution leverage new technology to assist EPA in meeting its strategic performance and business objectives? In other words, does the solution represent a technical improvement over the status quo?

2.3.3 Alternative Screening Results

This section presents a high level analysis of each alternative against the initial functional screening criteria. A summary is presented in Section 2.3.4.

1. Will the solution meet all of EPA's functional requirements for budget formulation and performance integration?

Upgrade	New Custom	New COTS	Partner with Federal Agency	Treasury GOTS
N	Y	Y	N	N

Notes:

- An upgrade to BAS would meet some of the requirement gaps that have been identified, but would not fill all of them.
- Development of a new system based on ROMs received would be directly based on all of EPA's requirements.
- The most likely candidate for a federal partnership scored significantly lower than EPA's current BAS solution, so this alternative would probably not meet EPA requirements without a good deal of rework.
- The EPA had previously evaluated the Treasury system and found it to have considerably less functionality than BAS.

2. Does the solution represent a single application in use agency-wide at a CFO Act agency today?

Upgrade	New Custom	New COTS	Partner with Federal Agency	Treasury GOTS
N	Y	Y	Y	N

Notes:

- While combined they are effectively in place agency-wide, an upgrade of BAS would maintain the current environment of separate applications addressing different needs at multiple levels of EPA.
- Development of a new custom or COTS solution would represent all functionality of BAS and IRMS, and would be in place throughout EPA.
- Known information indicates a partnership would likely result in an agency-wide solution, but the Treasury GOTS application currently only services components of other agencies.

3. Can the solution be easily integrated with the existing CGI / FSMP solution?

Upgrade	New Custom	New COTS	Partner with Federal Agency	Treasury GOTS
Y	Y	Y	N	N

Notes:

- An upgrade or new custom solution would be integrated as named interfaces with FSMP according to the final project plan.
- The CGI new COTS alternative would represent a separate, integrated module of the CGI Federal Momentum product.
- A partnership with another agency and the GOTS solution would both require a formal integration analysis prior to interfacing with FSMP.

4. Does the solution leverage new technology to assist EPA in meeting its strategic performance and business objectives? In other words, does the solution represent a technical improvement over the status quo?

Upgrade	New Custom	New COTS	Partner with Federal Agency	Treasury GOTS
N	Y	Y	Y	Y

Notes:

- An upgrade of BAS would result in a measured technical improvement over the status quo, but a full overhaul of the technical solutions for BAS / IRMS would not be completed.
- The new custom and new COTS solutions would represent significant technical and functional improvement.
- Both the federal agency partnership and GOTS alternatives are fully web-based, and would presumably result in a technical improvement over the solution in place today.

2.3.4 Alternative Screening Summary

Table 2.3.4.1 below provides a summary of the high level, qualitative responses to the functional screening criteria for each of the five general alternatives.

Criteria	Upgrade	New Custom	New COTS	Partner	GOTS
1. Will the solution meet all of EPA's functional requirements for budget formulation and performance integration?	N	Y	Y	N	N
2. Does the solution represent a single application in use agency-wide at a CFO Act agency today?	N	Y	Y	Y	N
3. Can the solution be easily integrated with the existing CGI / FSMP solution?	Y	Y	Y	N	N
4. Does the solution leverage new technology to assist EPA in meeting its strategic performance and business objectives? In other words, does the solution represent a technical improvement over the status quo?	N	Y	Y	Y	Y

Table 2.3.4.1 – Summary of Alternatives

It is clear that the two most viable alternatives from a functional perspective are those that seek to initiate a formal development of a new, more technologically advanced solution. EPA has current contractual relationships with both KeyLogic and CGI, and has received ROMs with technical and cost information from each vendor. Based on the results of the screening, these two alternatives will be considered further in the sections that follow.

3.0 Alternatives Evaluation

The formal activities for evaluating the two alternatives selected for additional review were accomplished through the use of a small team of independent evaluators. The evaluation team was made up of representatives from the Office of Research and Development (ORD) and the Office of the Chief Financial Officer (OCFO). The following supporting offices were represented equally on the evaluation team:

- Office of Budget (OCFO);
- Office of Planning, Analysis, and Accountability (OCFO);
- Office of Resource Management and Administration (ORD);
- Office of Technology Solutions (OCFO).

Each member of the evaluation team was familiarized with the two ROMs received from CGI and KeyLogic, the baseline budget requirements approved by EPA, the evaluation criteria, and scoring procedures, including rating scales and priority weightings. Initial reviews of the ROMs led to the need for follow-up questions back to each vendor. The evaluation team was provided these questions and the related responses to consider in completing their work.

3.1 Evaluation Criteria and Results of Review

Accomplishment of an effective evaluation of the ROMs required development of scoring criteria that fit within the information requested by EPA, and subsequently provided by the vendor responses. All of the criteria were organized into six higher level categories, which were then weighted based on importance. A rating scale was also developed to provide for objective scoring of the individual criteria. Criteria scores as determined by the individual evaluators were averaged to provide a single evaluation team score. These scores were then averaged for each category. The category weightings were applied to the averages to arrive at a score based on a 100 point scale.

Table 3.1.1 shows the rating scale used for the criteria scoring.

Rating	Non-Risk Criteria	Risk Criteria
5	Vendor has clearly and fully addressed all requirements and conforms to best practices.	Remote to little chance risk will be realized.
4	Vendor has addressed all requirements and conforms to most of the best practices related to this factor.	Unlikely to less than even chance risk will be realized.
3	Vendor has adequately addressed this factor. Few deviations from best practices related to this factor.	About even chance risk will be realized.
2	Vendor has somewhat addressed this factor. Some deviations from best practices related to this factor.	Likely to very good chance risk will be realized.
1	Critical issue(s) raises doubt as to Vendor qualification with this factor. Factor is inadequately addressed. Large deviations from best practices.	Very good to near certain chance risk will be realized.
0	Factor not addressed at all in vendor response.	N / A

Table 3.1.1 – Rating Scale

Table 3.1.2 provides the high level category groupings, average score based on the evaluation, and the weight applied to each group. The detailed criteria within each group, as well as the actual scores that were used to arrive at the numbers in table are presented in Appendix A.

Evaluation Categories	Average Scores		Weighted Scores		Weight %
	CGI	KL	CGI	KL	
1. Soundness / Reasonableness of the Proposed Solution	3.93	4.53	19.63	22.64	25
2. Reasonableness of the Cost Elements in the ROM	3.00	4.11	6.01	8.22	10
3. Impact on EPA's Total Cost of Ownership of Costs Not in the ROM	4.50	3.81	13.50	11.44	15
4. Risks Associated with the Proposed Solution	3.59	4.40	17.93	21.98	25
5. Past Performance and Related Engagements	4.00	4.33	12.00	13.00	15
6. Professional Arrangements	4.25	4.25	8.50	8.50	10
Totals			**77.57**	**85.77**	**100**

Table 3.1.2 – Summary Scores

The results of the independent evaluation of the two ROMs indicate an overall preference for the KeyLogic estimate of work to be completed and costs. The reviewers noted several significant differences between the ROMs as the basis for their ratings. Table 3.1.3 below provides a selection of these points for consideration.

General Category	CGI ROM	KeyLogic ROM
Proposed Solution	• Solution likely not ready by FSMP go-live, but beta version available earlier • Some requirements missed in ROM • Takes view of enhancing BF/PM module, which failed EPA PAT • Better chance for successful integration with FSMP Momentum • More EPA involvement likely • COTS product can take advantage of core Momentum COTS upgrades • May not be viewed as improvement over status quo	• Solution ready prior to FSMP go-live • New solution similar to BAS covers most "ease of use" concerns since EPA comfortable with existing solution / relationship with KL • EPA resource requirements specifically noted and are not as high • Separate upgrade schedule, but can be more tightly controlled by EPA
Cost Estimate	• Total cost approx $5.1m • Cost does not include likely required interface to payroll solution	• Total cost approx $4.6m • Integration with FSMP not included in ROM, but FSMP schedule includes BAS and IRMS interfaces
Risk	• Higher risk of losing control over meeting EPA requirements since is an enhancement to COTS product available to entire federal space • Less risk of OMB approval, since COTS	• EPA retains significantly more control over direction of the solution and incorporation of evolving requirements • Custom solution may be met with resistance, but since no other solutions out there, then maybe this is mitigated
Past Performance	• Limited in this area, but results from PAT indicate an inability to get their BF module to perform up to EPA standards	• KL has a significant advantage given their past experience with EPA's budget processes and history of business needs

Table 3.1.3 – Selected ROM Differences

3.2 Decision Considerations

The purpose of this section is to present additional information to assist in coming to closure on making the best decision for EPA with regard to budget formulation and performance integration. The sections that follow are meant to provide the salient points needed to put the overall alternatives analysis approach in line with expectations of GAO and OMB.

3.2.1 COTS vs. Custom

There is a clear preference in the federal government for the use of COTS software products in favor of custom development efforts. As evidenced by the work completed by the BFELOB cited in Section 2.2, there is a known lack of mature solutions available in the marketplace for effective budget formulation and performance integration. This helps to confirm the need to seriously consider a custom option.

Generally, there are many drivers that contribute to the COTS over custom position, including:

- Lower development cost;
- Reduced deployment schedule;
- Better system documentation;
- Proven performance and scalability; and
- Thorough testing and quality assurance.

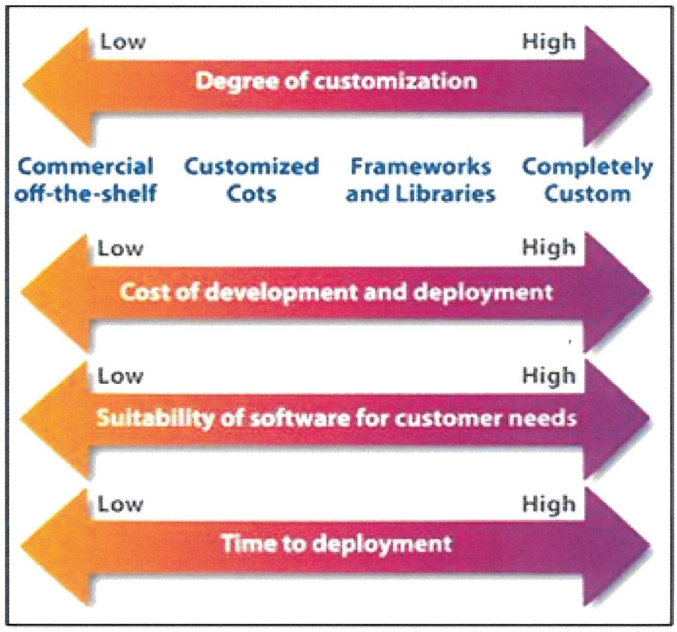

Figure 3.2.1 – COTS vs Custom Spectrum

A classical representation of the differences between a completely custom solution and a pure COTS solution is presented in Figure 3.2.1. This spectrum is valid for many cases, and generally holds true when comparing and contrasting the two approaches. However, as has been presented in the preceding analysis, EPA's circumstances are clearly different. Certainly the alternatives are actually more closely related to a Custom COTS (CGI) vs. a Custom solution with an existing framework (KeyLogic). The conventional wisdom related to development time, cost, and deployment does not hold well in EPA's case.

The sections that follow look at the general areas of difference between COTS and custom, and contrast them with what EPA will likely encounter based on the ROMs provided.

Degree of Customization

Typically, there is an obvious difference between the level of customization when comparing COTS and Custom solutions. The COTS solution is meant to provide processes that apply to most organizational needs, and encourages formal customer business process reengineering to fit within the established COTS product. The alternatives for EPA's budget formulation and performance integration solution are very similar though in terms of customization.

Both solutions are being developed based solely on EPA requirements. While CGI will most likely use this new module as a basis for future true COTS offerings, the functionality will be tailored to EPA and not necessarily a representation of the general needs of the overall Federal government. The area that the differences between the levels of customization are more clearly defined will be in the user interface, or look-and-feel, part of the solutions. Here, CGI will leverage what they have already developed – the true COTS part – in previous Momentum modules. The conventions will be the same as other modules. However, the KeyLogic solution yields the opportunity for EPA to have something that is more comfortable and appropriate from a user perspective; likely similar to the user interface of KeyLogic's current BAS solution for EPA.

Cost of Development and Deployment

The costs to develop deploy a fully custom solution over an existing COTS solution are generally much higher, since new code must be written, debugged, and tested prior to implementation. However, the alternatives available to EPA will really be brought up under very similar circumstances. Each solution will require extensive code development and testing activities to meet the stated requirements. The more truly custom of the two alternatives, KeyLogic, is estimated to cost less than the custom-COTS (CGI) alternative, which is completely opposite of what is typically encountered.

Suitability of Software for Customer Needs

The appropriateness of functionality in COTS products is generally not specific to customer needs. The COTS product includes functions that meet a variety of business requirements that some customers may or may not need. Typically this is addressed with through configuration activities, as well as the results of BPR. All of the functions that would be built into KeyLogic's application will be based on EPA business activities, and will be fully appropriate for EPA's work. While this may also be somewhat true of the custom-COTS solution from CGI, other aspects of the BF/PM module baseline may not be appropriate for EPA. The impact of this on the CGI solution is dependent on the method they would use to develop the module for EPA, and how much prior functionality is leveraged when tailoring to the stated requirements.

Time to Deployment

The time it takes to deploy a COTS or custom product is very closely related to the costs and time to develop and test the applications. As is clear from the preceding analysis, the two alternatives are very similar in the degree of development needed to meet EPA requirements. The KeyLogic solution is proposed to be available before the CGI offering, which is again opposite of what would be expected.

3.2.2 Other Cost Benefit Analysis Elements

Published guidance from both GAO and OMB indicate a desire for Federal organizations to perform formal and comprehensive lifecycle cost and benefit analyses of competing alternatives. Generally this guidance seeks to enforce a discipline of selecting an alternative that has a better return on investment (ROI), higher net present value (NPV), and lower payback period (PP) versus one that is driven only by requirements. The analysis performed for the EPA case incorporates as much of this guidance as possible, but there were limitations to full application because of the size and scope of the EPA initiative, as well as a lack of necessary information. Table 3.2.2.1 below provides insight into the formally recommended factors preferred by GAO and OMB, and why each was or was not applicable to the EPA alternative analysis.

Recommended Step	EPA Approach
1. Develop the Base Case	The base case is a full costing of the status quo to be compared to the alternatives being analyzed. EPA determined that the status quo was not a viable alternative – to do nothing would be taking steps backward – so development of the base case costs is not applicable to EPA.

Recommended Step	EPA Approach
2. Develop Unadjusted Costs by Phase	Full lifecycle costing requires developing costs for each phase of development consistent with agency policy. The phases applicable to EPA include Definition, Acquisition / Development, Implementation, Operations and Maintenance, and Termination. EPA requested ROMs from the subject vendors as the starting point for this analysis. A ROM is a higher level estimate of the costs and time required to develop the solution. They did not include detail costs broken down by development phase. Past experience with EPA suggests that there is not much difference between the two in terms of long term maintenance costs as compared together or with current operations. As a result, only the costs provided in the ROMs were considered.
3. Perform Risk Analysis	A risk analysis will identify all of the risks associated with the competing alternatives, assess impact and probability, and be used in calculating risk-adjusted lifecycle costs for comparison. The evaluation team compared risks directly as part of the criteria used to assess the two ROMs received from CGI and KeyLogic. The risks were not further assessed by assigning dollar values to the impacts or probability of occurrence because it would not have materially affected either alternative.
4. Document Tangible and Intangible Benefits	Benefits of any kind are closely related to risks, and require analysis. Tangible benefits can be measured quantitatively, while intangible benefits are more qualitative. The applicable benefits of each alternative available to EPA are more qualitative in nature, and are referenced or implied by the independent evaluation team's review results.
5. Evaluate NPV, ROI, and PP of Competing Alternatives	The financial evaluation of the competing alternatives was limited to the cost information provided by the ROMs, and as such do not provide real distinction between the two. EPA is working with a single cost estimate under a fixed-price scenario, so without quantifiable cost adjustments (benefits or risks) the measures of NPV, ROI, or PP provide no additional guidance to support a final decision.

Table 3.2.2.1 – Selected ROM Differences

4.0 Solution Recommendation

The evaluation team independently reviewed and assessed the CGI and KeyLogic solutions based on all of the information provided by the ROMs. The team collectively reached the conclusion that the KeyLogic custom solution was a better overall option for EPA. However, as described in Section 3.1 and in Appendix A, the overall scores were relatively close. The most significant differentiators between the solutions were the ease of use considerations, knowledge of EPA business, and lower cost in favor of KeyLogic, while CGI came out a little better in the areas of integration with FSMP, and the ability to have upgrades tied to the use of a single Momentum application.

Appendix A Evaluation Results

The following table presents the averages of the detailed scores provided by the evaluation team. Note that scores were averaged for each criteria group, which are represented by the highlighted rows in the table below.

	Actual Scores		Weighted Scores		Weight
	CGI	KeyLogic	CGI	KeyLogic	%
Soundness / Reasonableness of the Proposed Solution	**3.93**	**4.53**	**19.63**	**22.64**	**25**
1. Degree the vendor's end state solution meets EPA's vision of the desired end state. EPA's vision for this initiative can be defined as: To develop and deploy a new integrated financial and performance budget formulation system to replace the existing BAS, PERS, ACS, and IRMS applications. The new system should maximize flexibility to adapt to the evolving budget formulation process at EPA while minimizing long term operating costs to the agency.	3.75	4.00			
2. Degree to which the vendor addressed all the key elements requested by EPA for the ROM. At a minimum, these key elements should include clear, concise information about the solution's: • Business objective • Key assumptions • Proposed solution cost and timeframe • Positive Impact to EPA	3.75	4.25			
3. Degree that the vendor's assumptions are reasonable and acceptable to EPA. See separate summary of assumptions.	4.00	4.33			
4. Degree to which the vendor addressed the full set of EPA's requirements	3.50	3.00			
5. Reasonableness of the vendor's proposed schedule	3.25	3.75			
6. Capability of the solution to be managed with minimal required EPA resource / personnel usage.	3.00	4.67			
7. Capability of the solution to interoperate with Momentum	4.75	3.75			
8. Capability of the solution to interoperate with EPA's data warehouse	2.67	4.67			
9. Capability of the solution to interoperate with EPA's payroll system	2.67	4.00			
Reasonableness of the Cost Elements in the ROM	**3.00**	**4.11**	**6.01**	**8.22**	**10**
1. Cost to purchase/design/develop, and enhance the solution to meet EPA's requirements	3.67	4.33			
2. Cost to interface the system with Momentum, the data warehouse, and the payroll system	1.67	3.67			
3. Reasonableness of proposed labor categories, mix, and rates.	3.67	4.33			
Impact on EPA's Total Cost of Ownership of Costs Not in the ROM	**4.50**	**3.81**	**13.50**	**11.44**	**15**
1. Operations and Maintenance Cost over a ten year life cycle	4.00	3.50			

	Actual Scores		Weighted Scores		Weight
	CGI	KeyLogic	CGI	KeyLogic	%
2. Cost to adapt/modify the solution to interface with future versions/releases of Momentum	5.00	3.75			
3. Cost to adapt/modify the solution to comply with future OMB/FSIO requirements	4.50	4.00			
4. Cost to acquire additional hardware and other infrastructure to operate and use the solution	4.50	4.00			
Risks Associated with the Proposed Solution	**3.59**	**4.40**	**17.93**	**21.98**	**25**
1. Risk that the vendor under estimated the proposed solution's design and implementation costs	3.33	4.67			
2. Risk that the vendor will not address all of EPA's requirements	2.75	3.50			
3. Risk that the solution will not be accepted by EPA users because: • Solution is not perceived to be an improvement over the status quo • Solution will not allow flexibility for timely adherence to evolving requirements of Congress, OMB, and other external parties • Solution does not meet needs of cuff system users	3.03	4.14			
4. Risk that EPA will be forced to purchase unwanted/unneeded functions that are bundled with desired functions	3.67	5.00			
5. Risk that OMB/FSIO will not support the proposed solution	5.00	4.00			
6. Risk that EPA will have limited control over future enhancements or modifications and on the priority assigned to the enhancements.	2.50	5.00			
7. Risk that the vendor will stop supporting the product or go bankrupt	4.25	4.50			
8. Risk that the solution will allow the vendor to "lock in" at EPA and be difficult to replace in the future	3.50	3.75			
9. Risk that the vendor's managers, developers, and analysts will not be available to EPA when needed	4.25	5.00			
Past Performance and Related Engagements	**4.00**	**4.33**	**12.00**	**13.00**	**15**
1. Experience with Vendor	3.67	3.50			
2. Management team experience working together	4.00	5.00			
3. Experience integrating with other systems	4.33	4.50			
Professional Arrangements	**4.25**	**4.25**	**8.50**	**8.50**	**10**
1. Agreement to use standard contract	4.50	4.50			
2. Contract Exceptions	4.00	4.00			
	Grand Total Score		**77.57**	**85.77**	**100**